



**By RPAD**  
**A/WG/261/ 2023**  
**September 11, 2023**

**The Member Secretary**  
Gujarat Pollution Control Board  
Paryavaran Bhavan  
Sector 10 A  
**Gandhinagar 382 010**

**Subject: Tata Chemicals Limited, Mithapur**  
**Submission of the Environmental Statement for Year 2022-23**

Sir

In accordance with Rule 14 of Environment Protection Rules 1992, please find enclosed, the Environmental Statement as per Form V for the year 2022-23 (ending on 31 March 2023).

Kindly acknowledge receipt of the same.

Thanking you,

Yours sincerely  
Tata Chemicals Limited

**Sanjeev Jain**  
**AGM - Environment Management System**

- CC: 1 Regional Officer, GPCB Jamnagar
- 2 Deputy Director General of Forest (C),  
Ministry of Environment, Forest and Climate Change  
Integrated Regional Office, Gandhinagar  
A-Wing-407 & 409, Aranya Bhawan, Near CH-3 Circle,  
Sector 10A, Gandhinagar, Gujarat – 382 010  
iro.gandhingr-mefcc@gov.in (By Email Only)
- 3 The Regional Director, Central Pollution Control Board,  
Parivesh Bhawan, Opp. VMC Ward Office No. 10, Subhanpura  
Vadodara -390 023 (By Email Only) Email: ec-rdw.cpcb@gov.in

**TATA CHEMICALS LIMITED**

Mithapur 361 345 District Devbhoomi Dwarka Gujarat  
Tel + 91 (02892) 665991 / 2 / 3 / 4 Fax + 91 (02892) 223361 www.tatachemicals.com  
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001  
CIN : L24239MH1939PLC002893

**FORM - V**

(See rule 14)

**ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31st MARCH, 2023**

**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  
**02892-675259/ 5201**
- ( 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	10,91,000 MT/ 13,16,000 MT (CTE)
2	Sodium Bi Carbonate (All grades)	1,50,000 MT/ 3,50,000 MT (CTE)
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	757 TPH/ 1057 TPH (CTE)
15	Power	85 MW/ 125 MW (CTE)

- ( iv ) **Year of Establishment** : 1939
- ( v ) **Date of last Environmental Statement submitted.** : Vide Letter No. A/WG/373/2022  
Dated August 27, 2022

**PART : B Water and Raw Material Consumption**

(i) **Water Consumption In M<sup>3</sup> / Day**

Category	2021-22		2022-23	
	Fresh Water	Sea Water	Fresh Water	Sea Water
Process	Nil	24,344	Nil	24,629
Cooling	Nil	1,62,254	Nil	1,71,316
Domestic	Nil	2,267	Nil	2,443

Internal sources

Name of Products	Process water consumption per unit of product output.			
	During the previous financial year 2021-22		During the current financial year 2022-23	
	Sea Water	Fresh Water	Sea Water	Fresh Water
Soda Ash Plant (KL/MT)	43.91	Nil	46.00	Nil
Cement Plant (KL/MT)	0.59	Nil	0.55	Nil
Captive Power Plant in (KL/MWh)	3.43	Nil	3.62	Nil
RO Plant (KL/KL of Product Water)	2.83	Nil	2.78	Nil
Others (KL/MT)	4.75	Nil	4.80	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 2021-22	During the current financial year 2022-23
Salt As Such	Soda Ash	Tons	2.10	2.16
Limestone		Tons	1.35	1.35
Coke + Coal		Tons	0.11	0.10
Ammonia		Kg	2.36	2.32
Sod. Sulphide		Kg	2.09	1.45
Soda Ash		Tons	0.05	0.05
Soda Ash	Sodium Bicarbonate	Tons	0.71	0.71
Brine (KL)	Vac. Salt	KL	5.00	4.81
Potassium Iodate (Kg)		Kg	0.05	0.04
Sulfuric Acid	Liquid Chlorine	Tons	0.02	0.02
Chlorine	Hydrochloric Acid	Tons	0.31	0.26
Hydrogen		Tons	0.01	0.01
Salt	Caustic Soda	Tons	1.67	1.51
HCl	Bromine	Tons	5.41	5.18
Liq. Chlorine		Tons	0.80	0.81
Caustic Soda		Tons	0.82	0.94
Limestone (Fines)	Clinker/ Cement	Tons	1.35	1.36
Clay/ Sandstone/ Laterite/Marl		Tons	0.22	0.21
Bauxite/ Tailing Waste/ Iron sludge/ Blue dust		Tons	0.01	0.01
ESF Cake		Tons	0.09	0.09
Fly Ash/ JPF dust for Cement		Tons	0.04	0.03

**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	-	7.8	Well Within Limits
Temperature in Deg C	-	26	Well Within Limits
Ammonical Nitrogen in mg/l	0.36	1.9	Well Within Limits
Total Suspended Solids in mg/l	46.3	246	Well Within Limits
Color in Units	-	17	Well Within Limits
Oil & Grease in mg/l	0.28	1.5	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
<b>BOD for 3 days at 27°C, mg/l</b>	Recycled	3	Well Within Limits
<b>Suspended Solids, mg/l</b>	Recycled	58	Well Within Limits
<b>pH</b>	Recycled	7.7	Well Within Limits
<b>Faecal Coliform, MPN/100ml</b>	Recycled	0.40	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	
<b>Particulate Matter</b>	TPD	2.04	mg/Nm3	23	Well Within Limits
<b>Oxides of Sulphur</b>	TPD	4.68	mg/Nm3	46	Well Within Limits
<b>Oxides of Nitrogen</b>	TPD	9.84	mg/Nm3	27	Well Within Limits

<b>Chlorine</b>	process vent	mg/nM3	0.3	Well Within Limits
<b>Hydrochloric Acid</b>	process vent	mg/nM3	1.4	Well Within Limits
<b>Bromine</b>	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
			2021-22	2022-23	
<b>(a) From Process, (b) From pollution Control facilities</b>					
<b>Schedule-I</b>					
1	Used/ Spent oil (Sch-I, Cat 5.1)	KL	22.48	28.37	Cat 5.1
2	Waste/ Residue containing Oil (Sch-I, Cat 5.2)	MT	1.48	0.3	Cat 5.2
3	Spent Ion Exchange Resin (Sch-I, Cat 35.2)	MT	59.47	Nil	Cat 35.2
4	Discarded Containers (Sch-I, Cat 33.1)	Nos	1328	1211	Cat 33.1
5	Tarry residues and Still bottom from distillation - TDI/coal Tar	MT	66.83	Nil	Cat 1.2
<b>OTHER WASTE</b>					
1	Used Lead Acid/Ni-Cd Batteries/Other	MT	1.11	10.20	-
2	E-waste	MT	5.8	3.66	-

**PART: E**

**SOLID WASTES**

Sr.No.	Solid Waste	Total Quantity in MT		
		2021-22	2022-23	
<b>(a) From Process</b>				
1	Under sized Lime Stone	5,70,591	5,26,871	
2	Milk of Lime Rejects	26,241	28,002	
3	Fly ash and boiler reject	97,826	88,861	
4	Effluent solids	2,77,424	2,78,272	
5	Static Salt Dissolver Wastes	66,348	79,353	
<b>(b) From pollution Control facilities</b>				
1	Solid waste generated from desulphurisation process of flue gas of power plant is included in fly ash reported as above			
<b>C-1 Quantity recycled or re-utilized within the unit</b>				
1	Under sized Lime Stone	5,70,591	5,26,871	
2	Milk of Lime Rejects	26,241	28,002	
3	Fly ash and boiler reject	97,826	88,861	including supply to external party
4	Effluent solids	2,77,424	2,78,272	including greenbelt/ bund/ external
<b>C-2</b>	<b>Quantity Sold</b>	51381	54,822	Fly ash to Brick manufacturer
<b>C-3 Disposed</b>				
1	Fly ash and boiler reject	51381	54,822	To Brick Manufacturers
2	Effluent solids	277424	278272	To Brick/ Blocks Manufacturers

**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 guidelines.
7. TCL is publishing Business Responsibility 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	(in Rupees)
EN 31	Cost towards Environment management System and ISO certifications, EMS)	1,53,30,376
EN 31	Operation and Maintenance, material and services, and related personnel costs for running ETP and STP	5,65,27,614
EN 32	Capital Expenditures for Environmental Improvements	16,01,50,653

##### **3 Environment audit**

- Environment audit for Financial Year 2022-23 completed by Schedule-I Auditor appointed by GPCB.

##### **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 (TCSRDR) Details are available on TCSRDR website [www.tcsrdr.org](http://www.tcsrdr.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**

- Awarded Sustainable Organisation at Economic Times Global Sustainability Congress in July 2022
- TAAP (Tata Affirmative Action Program) Jury Award in May 2022
- Most Preferred Workplaces in Manufacturing 2022-23

##### **8 Sustainability Initiatives**

- Company's sustainability initiatives are available on web portal <http://sustainability.tatachemicals.com>
- Activities and Awareness Campaign during Tata Sustainability Month 2022-23