

**FORM - V**

(See rule 14)

**ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31st MARCH, 2022**

**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/350/2021  
Dated August 24, 2021

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

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

Category	2020-21		2021-22	
	Fresh Water	Sea Water	Fresh Water	Sea Water
Process	Nil	21,960	Nil	24,344
Cooling	Nil	1,48,096	Nil	1,62,254
Domestic	Nil	0	Nil	2,267

Internal sources

Name of Products	Process water consumption per unit of product output.			
	During the previous financial year 2020-21		During the current financial year 2021-22	
	Sea Water	Fresh Water	Sea Water	Fresh Water
Soda Ash Plant (KL/MT)	46.37	Nil	43.91	Nil
Cement Plant (KL/MT)	0.58	Nil	0.59	Nil
Captive Power Plant in (KL/MWh)	3.32	Nil	3.43	Nil
RO Plant (KL/KL of Product Water)	2.58	Nil	2.83	Nil
Others (KL/MT)	4.50	Nil	4.75	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 2020-21	During the current financial year 2021-22
Salt As Such	Soda Ash	Tons	2.06	2.10
Limestone		Tons	1.36	1.35
Coke + Coal		Tons	0.11	0.11
Ammonia		Kg	2.97	2.36
Sod. Sulphide		Kg	2.17	2.09
Soda Ash		Tons	0.06	0.05
Soda Ash	Sodium Bicarbonate	Tons	0.71	0.71
Brine (KL)	Vac. Salt	KL	4.86	5.00
Potassium Iodate (Kg)		Kg	0.07	0.05
Sulfuric Acid	Liquid Chlorine	Tons	0.03	0.02
Chlorine	Hydrochloric Acid	Tons	0.29	0.31
Hydrogen		Tons	0.01	0.01
Salt	Caustic Soda	Tons	1.66	1.67
HCl	Bromine	Tons	5.77	5.41
Liq.Chlorine		Tons	1.05	0.80
Caustic Soda		Tons	0.89	0.82
Limestone (Fines)	Clinker/ Cement	Tons	1.36	1.35
Clay/ Sandstone		Tons	0.12	0.17
Marl		Tons	0.03	0.05
Bauxite/ Tailing Waste/ Iron sludge/ Blue dust		Tons	0.06	0.01
ESF Cake		Tons	0.09	0.09
Fly Ash/ JPF dust for Cement		Tons	0.06	0.04

**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	-	7.4	Well Within Limits
Temperature in Deg C	-	25	Well Within Limits
Ammonical Nitrogen in mg/l	0.20	1.12	Well Within Limits
Total Suspended Solids in mg/l	46.7	264	Well Within Limits
Color in Units	-	17	Well Within Limits
Oil & Grease in mg/l	0.21	1.2	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	0.5	Well Within Limits
<b>Suspended Solids, mg/l</b>	Recycled	35.7	Well Within Limits
<b>pH</b>	Recycled	7.9	Well Within Limits
<b>Faecal Coliform, MPN/100ml</b>	Recycled	0.03	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	2.71	mg/Nm3	27	Well Within Limits
<b>Oxides of Sulphur</b>	TPD	3.73	mg/Nm3	46	Well Within Limits
<b>Oxides of Nitrogen</b>	TPD	5.67	mg/Nm3	37	Well Within Limits

<b>Chlorine</b>	process vent	mg/nM3	0.2	Well Within Limits
<b>Hydrochloric Acid</b>	process vent	mg/nM3	0.7	Well Within Limits
<b>Bromine</b>	process vent	mg/nM3	0.2	Well Within Limits

**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
			2020-21	2021-22	
<b>(a) From Process, (b) From pollution Control facilities</b>					
1	Used/ Spent oil (Sch-I, Cat 5.1)	KL	41.77	22.48	Cat 5.1
2	Waste/ Residue containing Oil (Sch-I, Cat 5.2)	MT	0.1	1.5	Cat 5.2
3	Spent Ion Exchange Resin (Sch-I, Cat 35.2)	MT	Nil	59.47	Cat 35.2
4	Discarded Containers (Sch-I, Cat 33.1)	Nos	1266	1328	Cat 33.1
5	Tarry residues and Still bottom from distillation - TDI/coal Tar	MT	-	66.83	Cat 1.2
<b>OTHER WASTE</b>					
1	Used Lead Acid/ Ni-Cd Batteries	Nos	420	28	1 lot other batteries
2	E-waste	MT	8.8	5.8	-

**PART: E**

**SOLID WASTES**

Sr.No.	Solid Waste	Total Quantity in MT		
		2020-21	2021-22	
<b>(a) From Process</b>				
1	Under sized Lime Stone	4,66,524	5,70,561	
2	Milk of Lime Rejects	23,652	26,232	
3	Fly ash and boiler reject	98,984	97,826	
4	Effluent solids	1,48,617	1,76,058	
5	Static Salt Dissolver Wastes	53,137	66,348	
<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	4,66,524	5,70,561	
2	Milk of Lime Rejects	23,652	26,232	
3	Fly ash and boiler reject	98,984	97,826	including supply to external party
4	Effluent solids	1,56,269	1,88,101	including greenbelt/ bund/ external
<b>C-2</b>	<b>Quantity Sold</b>	42202	51,381	Fly ash to Brick manufacturer
<b>C-3 Disposed</b>				
1	Fly ash and boiler reject	42202	51,381	To Brick Manufacturers
2	Effluent solids	1110	43	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)	1,26,98,928
EN 31	Operation and Maintenance, material and services, and related personnel costs for running ETP and STP	7,48,70,839

**3 Environment audit**

- Environment audit for Financial Year 2021-22 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
- 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.tcsrd.org](http://www.tcsrd.org).

**6 Online Monitoring System**

- Online emission monitoring system is established as per CPCB guidelines

**7 Recognitions**

- Awarded for ESG Performance in the Manufacturing category at Dun & Bradstreet Award
- 'Heritage Company of India' and 'Excellence in CSR' Awards at FICCI's India @75: Chemical and Petrochemical Industry Awards 2021
- Awarded in circular economy and carbon neutrality innovations category at the 15th International Quality Innovation Awards 2021

**8 Sustainability Initiatives**

- Company's sustainability initiatives are available on web portal <http://sustainability.tatachemicals.com>
- Activities and Awareness Campaign during Tata Sustainability Month 2021-22