FORM - V

(See rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31st MARCH, 2021

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

Name of Mithapur chemical complex Unit Head:

Mr. N Kamath
Vice President- Manufacturing
Address: Tata Chemicals Limited
Mithapur, Dist.- Devbhumi Dwarka, (Gujarat)- 361345
Contact No. **02892-665259/ 5201**

(ii) Industry Category Primary- (STC Code) Secondary- (SIC Code) **:** Soda Ash, Captive Power Plant, Chloro-caustic, Vacuum Salt and Cement

(iii) **Production Capacity**

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/312/2020 Dated August 21, 2020

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

(i) **Water Consumption In M^3 / Day**

Category	2019-20		2020-21	
	Fresh Water	Sea Water	Fresh Water	Sea Water
Process	Nil	17,405	Nil	21,960
Cooling	Nil	1,75,062	Nil	1,48,096
Domestic	Nil	300	Nil	0

Internal sources

Name of Products	Process water consumption per unit of product output.			
	During the current financial year 2019-20		During the current financial year 2020-21	
	Sea Water	Fresh Water	Sea Water	Fresh Water
Soda Ash Plant (KL/MT)	50.58	Nil	46.37	Nil
Cement Plant (KL/MT)	0.77	Nil	0.58	Nil
Captive Power Plant in (KL/MWh)	3.87	Nil	3.32	Nil
RO Plant (KL/KL of Product Water)	3.17	Nil	2.58	Nil
Others (KL/MT)	6.38	Nil	4.50	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 current financial year 2019-20	During the current financial year 2020-21
Salt As Such	Soda Ash	Tons	2.03	2.06
Limestone		Tons	1.31	1.36
Coke + Coal		Tons	0.11	0.11
Ammonia		Kg	2.50	2.97
Sod. Sulphide		Kg	2.07	2.17
Soda Ash		Tons	0.06	0.06
Soda Ash	Sodium Bicarbonate	Tons	0.71	0.71
Brine (KL)	Vac. Salt	KL	5.58	4.86
Potassium Iodate (Kg)		Kg	0.06	0.07
Sulfuric Acid	Liquid Chlorine	Tons	0.04	0.03
Chlorine	Hydrochloric Acid	Tons	0.31	0.29
Hydrogen		Tons	0.01	0.01
Salt	Caustic Soda	Tons	1.66	1.66
HCl	Bromine	Tons	4.49	5.77
Liq.Chlorine		Tons	0.97	1.05
Caustic Soda		Tons	0.82	0.89
Limestone (Fines)	Clinker/ Cement	Tons	1.33	1.36
Clay/ Marl/ Sandstone		Tons	0.19	0.15
Bauxite/ Tailing Waste/ Iron sludge/ Blue dust		Tons	0.004	0.06
ESF Cake		Tons	0.10	0.09
Gypsum for Cement		Tons	0.05	0.06
Fly Ash/ JPF dust for Cement		Tons	0.03	0.06

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	-	7.9	Well Within Limits
Temperature in Deg C	-	29	Well Within Limits
Ammonical Nitrogen in mg/l	0.47	2.16	Well Within Limits
Total Suspended Solids in mg/l	28.8	132	Well Within Limits
Color in Units	-	19	Well Within Limits
Oil & Grease in mg/l	0.03	0.2	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
BOD for 3 days at 27°C, mg/l	Recycled	8.7	Well Within Limits
Suspended Solids, mg/l	Recycled	14.2	Well Within Limits
pH	Recycled	7.3	Well Within Limits
Faecal Coliform, MPN/100ml	Recycled	850	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	1.30	mg/Nm3	27	Well Within Limits
Oxides of Sulphur	TPD	4.82	mg/Nm3	117	Well Within Limits

Oxides of Nitrogen	TPD	7.80	mg/Nm3	161	Well Within Limits
Chlorine	process vent		mg/nM3	1.1	Well Within Limits
Hydrochloric Acid	process vent		mg/nM3	1.5	Well Within Limits
Bromine	process vent		mg/nM3	BDL	Well Within Limits

PART : D

HAZARDOUS WASTE

Sr. No	Hazardous Waste	Unit	Total Quantity		Characterisation as per HW Rules
			2019-20	2020-21	
(a) From Process, (b) From pollution Control facilities					**Schedule-I**
1	Used/ Spent oil (Sch-I, Cat 5.1)	KL	31.1	41.77	Cat 5.1
2	Waste/ Residue containing Oil (Sch-I, Cat 5.2)	MT	0.9	0.1	Cat 5.2
3	Spent Ion Exchange Resin (Sch-I, Cat 35.2)	MT	6.92	Nil	Cat 35.2
4	Discarded Containers (Sch-I, Cat 33.1)	Nos	1475	1266	Cat 33.1
OTHER WASTE					
1	Used Lead Acid/ Ni-Cd Batteries	Nos	286	420	-
2	E-waste	MT	8.2	8.79	-

PART: E

SOLID WASTES

Sr.No.	Solid Waste	Total Quantity in MT		
		2019-20	2020-21	
(a) From Process				
1	Under sized Lime Stone	5,49,815	4,66,524	
2	Milk of Lime Rejects	28,104	23,652	
3	Fly ash and boiler reject	98,680	98,984	
4	Effluent solids	1,57,179	1,48,617	
5	Static Salt Dissolver Wastes	57,625	53,137	
(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**			
1	Under sized Lime Stone	5,49,815	4,66,524	
2	Milk of Lime Rejects	33,889	23,652	
3	Fly ash and boiler reject	1,03,962	98,984	
4	Effluent solids	1,40,785	1,56,269	
C-2	**Quantity Sold**	Nil	42,202	Fly ash to Brick manufacturer
C-3	**Disposed**			
1	Fly ash and boiler reject	35949	42,202	To Brick Manufacturers
2	Effluent solids	333	1110	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 is certified for ISO 14001-2015 .
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. Use of Petcoke (synthetic fuels) to reduce the dependence on Natural resource of fresh coal and Lignite

5. Operation of the RO plant. RO water supplemented ground water and TCL has stopped withdrawal of ground water since 2007.
6. TCL is submitting its GHG emissions as per Carbon disclosure project
7. TCL is publishing sustainability Report as per GRI guidelines.
8. 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 Environement management System and ISO certifications, EMS)	1,49,15,618
EN 31	Operation and Maintenance, material and services, and related personnel costs for running ETP and STP	10,62,86,693

3 Environment audit

- Environment audit for Financial Year 2020-21 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 (TCSRD) Details are available on TCSRD website www.tcsrd.org.

6 Online Monitoring System

- Online emission monitoring system is established as per CPCB guidelines

7 Recognitions

- Tata Chemicals wins CII National Awards for Excellence in Water Management
- Tata Chemicals bags 3rd spot in Responsible Business Ranking 2020
- Tata Chemicals wins ‘Product Innovator of the Year Award’ at FICCI Chemicals and Petrochemicals 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 2020-21