FORM - V

(See rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31st MARCH, 2020

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

(iii) **Production Capacity**

S. No.	Product	CCA/CTE capacity
		Capacity/Year
1	Soda Ash	10,91,000 MT
2	Sodium Bi Carbonate (All grades)	1,50,000 MT
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	Gypsum	134,892 MT
10	Clinker	8,25,000 MT
	Cement (OPC/PPC)	7,87,000 MT
11	Desalination water	2,160,498 M3
12	Steam	757 T/Hour
13	Power	85 MW

(iv) Year of Establishment : 1939

(v) Date of last Environmental Statement submitted. : Vide Letter No. A/WG/338/2019 Dated August 13, 2019

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

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

Category	2018-19		2019-20	
	Fresh Water	Sea Water	Fresh Water	Sea Water
Process	Nil	17,714	Nil	17,405
Cooling	Nil	1,91,415	Nil	1,75,062
Domestic	Nil	300	Nil	300

Name of Products	Process water consumption per unit of product output.			
	During the previous financial year 2018-19		During the current financial year 2019-20	
	Sea Water	Fresh Water	Sea Water	Fresh Water
Soda Ash Plant (KL/MT)	54.66	Nil	50.58	Nil
Cement Plant (KL/MT)	0.68	Nil	0.77	Nil
Captive Power Plant in (KL/MWh)	3.84	Nil	3.87	Nil
RO Plant (KL/KL of Product Water)	3.17	Nil	3.17	Nil
Others (KL/MT)	6.27	Nil	6.38	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 2018-19	During the current financial year 2019-20
Salt As Such	Soda Ash	Tons	2.086	2.033
Limestone		Tons	1.338	1.306
Coke + Coal		Tons	0.106	0.108
Ammonia		Kg	2.585	2.500
Sod. Sulphide		Kg	1.942	2.065
Soda Ash		Tons	0.054	0.056
Soda Ash	Sodium Bicarbonate	Tons	0.710	0.710
Brine (KL)	Vac. Salt	KL	5.059	5.575
Potassium Iodate (Kg)		Kg	0.065	0.055
Sulfuric Acid	Liquid Chlorine	Tons	0.024	0.036
Chlorine	Hydrochloric Acid	Tons	0.312	0.309
Hydrogen		Tons	0.009	0.009
Salt	Caustic Soda	Tons	1.674	1.656
HCl	Bromine	Tons	3.525	4.487
Liq.Chlorine		Tons	0.694	0.973
Caustic Soda		Tons	0.708	0.823
Limestone (Fines)	Clinker/ Cement	Tons	1.372	1.327
Clay		Tons	0.069	0.030
Marl/ Sandstone		Tons	0.134	0.161
Iron Sludge/ Blue dust		Tons	0.003	0.004
ESF Cake		Tons	0.087	0.097
Gypsum for Cement		Tons	0.051	0.049
Fly Ash for Cement		Tons	0.032	0.027

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	-	8.1	Well Within Limits
Temperature in Deg C	-	32	Well Within Limits
Ammonical Nitrogen in mg/l	0.53	2.43	Well Within Limits
Total Suspended Solids in mg/l	25.0	115	Well Within Limits
Color in Units	-	12	Well Within Limits
Oil & Grease in mg/l	0.22	1.0	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	9.4	Well Within Limits
Suspended Solids, mg/l	Recycled	46.3	Well Within Limits
pH	Recycled	7.7	Well Within Limits
Faecal Coliform, MPN/100ml	Recycled	815	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	1.32	mg/Nm3	14.3	Well Within Limits
Oxides of Sulphur	TPD	3.52	mg/Nm3	95.7	Well Within Limits
Oxides of Nitrogen	TPD	6.11	mg/Nm3	153.0	Well Within Limits
Chlorine	process vent		mg/nM3	0.5	Well Within Limits

Hydrochloric Acid	process vent	mg/nM3	0.7	Well Within Limits
Bromine	process vent	mg/nM3	0.5	Well Within Limits

PART : D

HAZARDOUS WASTE

Sr. No	Hazardous Waste	Unit	Total Quantity		Characterisation as per HW Rules
			2018-19	2019-20	
(a) From Process, (b) From pollution Control facilities					**Schedule-I**
1	Used/ Spent oil (Sch-I, Cat 5.1)	KL	24.78	31.10	Cat 5.1
2	Waste/ Residue containing Oil (Sch-I, Cat 5.2)	MT	1.2	0.9	Cat 5.2
3	Spent Ion Exchange Resin (Sch-I, Cat 35.2)	MT	-	6.92	Cat 35.2
4	Discarded Containers (Sch-I, Cat 33.1)	Nos	876	1475	Cat 33.1
OTHER WASTE					
1	Used Lead Acid/ Ni-Cd Batteries	Nos	54	286	-
2	E-waste	MT	6.31	8.2	-

PART: E

SOLID WASTES

Sr.No.	Solid Waste	Total Quantity in MT		
		2018-19	2019-20	
(a) From Process				
1	Under sized Lime Stone	4,00,361	5,49,815	
2	Milk of Lime Rejects	33,978	28,104	
3	Fly ash and boiler reject	1,24,430	98,680	
4	Effluent solids	1,75,743	1,57,179	
5	Static Salt Dissolver Wastes	44,531	57,625	
(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	4,00,361	5,49,815	
2	Milk of Lime Rejects	34,404	33,889	
3	Fly ash and boiler reject	62,132	1,03,962	
4	Effluent solids	1,01,642	1,40,785	
C-2	**Quantity Sold**	Nil	Nil	
C-3	**Disposed**			
1	Fly ash and boiler reject	35,368	35949	To Brick Manufacturers
2	Effluent solids	270	200	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. 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	Waste disposal and treatment cost	23,02,14,509
EN 31	Treatment cost for air emissions - Stack monitoring, Bag filters etc.	22,05,01,697
EN 31	Operation and Maintenance, material and services, and related personnel costs for running ETP and STP	23,25,39,457
EN 31	Other environmental costs	5,26,15,685
		73,58,71,348

3 Environment audit

- Environment audit for Financial Year 2019-20 completed by Schedule-I Auditor approved by GPCB.

4 Environment Events

- Organised Environment awareness events like World Environment day ; World Ozone Day and World Earth day and involving participation of employees, members of community and representatives from local Government agencies and GPCB
- 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 is the top ranked company in India’s top companies for CSR and sustainability.
- CERTIFICATE OF MERIT- ICC AWARD FOR EXCELLENCE IN MANAGEMENT OF ENVIRONMENT
- Tata Chemicals receivesResponsible CareCertification from ICC forthird year in a row.

7 Sustainability Initiatives

- Company's sustainability initiatives are available on web portal http://sustainability.tatachemicals.com
- Activities and Awareness Campaign during Tata Sustainability Month 2019-20